

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Previously presented) The composition of Claim 33, wherein the hydrophilic component is a hydrophilic polymer, or a hydrophilic therapeutic, diagnostic, or prophylactic agent.
3. (Previously presented) The composition of Claim 34, wherein the therapeutic, diagnostic, or prophylactic agent is a protein, peptide, nucleotide, oligonucleotide, saccharide, polysaccharide, organic molecule, or combination thereof.
4. (Previously presented) The composition of Claim 33, wherein the hydrophobic component is a synthetic vinyl-type hydrophobic polymer, a non-vinyl-type hydrophobic polymer, naturally derived polymer, a membrane disruptive peptide, or a phospholipid bilayer disrupting agent.
- 5-7. (Canceled)
8. (Previously presented) The composition of Claim 33, wherein the pH-sensitive linkage is an acetal, orthoester, cis-aconityl group, hydrazone, ester, Schiff base, vinyl ether, dithioacetal, tert butyl ester, carbamate, thioester, or phosphoramidate.
9. (Previously presented) The composition of Claim 34, wherein the therapeutic, diagnostic, or prophylactic agent is coupled to either the hydrophilic or the hydrophobic component by a degradable or disruptable linkage.
- 10-12. (Canceled)
13. (Previously presented) The composition of Claim 33, wherein the conjugate further comprises a ligand, wherein the ligand specifically binds to a target molecule.
14. (Previously presented) The composition of Claim 34, wherein the therapeutic, diagnostic, or prophylactic agent is complexed to a component of the conjugate.

15. (Previously presented) The composition of Claim 33, wherein the pH sensitive linkage is hydrolyzed within about 30 to 60 minutes at a pH between 5.0 and 5.5.

16. (Previously presented) The composition of Claim 33 further comprising a pharmaceutically acceptable carrier for delivery of the conjugate to a cell or organelle.

17. (Previously presented) The composition of Claim 16, wherein the carrier provides for systemic delivery of the conjugate, local delivery of the conjugate, or topical delivery of the conjugate.

18. (Canceled)

19. (Previously presented) The composition of Claim 34, wherein the therapeutic, diagnostic, or prophylactic agent is an antisense nucleotide, ribozyme, ribozyme guide sequence, triplex forming oligonucleotide, or gene.

20-32. (Canceled)

33. (Currently amended) A composition for enhancing transport through a membrane, comprising a hydrophilic conjugate having a hydrophobic component linked to a hydrophilic component by a pH-sensitive linkage, wherein the pH-sensitive linkage is stable at a pH between 6.8 and 8 and hydrolyzed at a pH less than 6.5 to release the hydrophobic component, and wherein the hydrophobic component is ~~membrane-disruptive~~ membrane disruptive and allows enhanced transport through a membrane only when released from the hydrophilic conjugate.

34. (Previously presented) The composition of Claim 33 further comprising an agent, wherein the agent is a therapeutic, diagnostic, or prophylactic agent.

35. (Previously presented) The composition of Claim 33, wherein the hydrophobic component comprises a synthetic polymer.

36. (Previously presented) The composition of Claim 33, wherein the hydrophilic component comprises a polyalkylene oxide.

37. (Canceled)

38. (Currently amended) A ~~hydrophilic~~ conjugate, comprising:

(a) a hydrophobic synthetic vinyl-type polymer, wherein the polymer is endosomal ~~membrane-disruptive~~ membrane disruptive when released from the hydrophilic conjugate;

(b) a plurality of pendant hydrophilic polyalkylene oxide components; and

(c) a plurality of pH-sensitive linkages, wherein each of the pendant polyalkylene oxide components is covalently linked to the polymer through a pH-sensitive linkage that is stable at a pH between 6.8 and 8 and hydrolyzed at a pH less than 6.5.

39. (Previously presented) The conjugate of Claim 38, wherein the synthetic vinyl-type polymer is a terpolymer of dimethylaminoethyl methacrylate, butyl methacrylate, and styrene benzaldehyde.

40. (Previously presented) The conjugate of Claim 38, wherein the pH-sensitive linkage is selected from the group consisting of an acetal, a dithioacetal, an ester, an orthoester, and a carbamate.

41. (Currently amended) A composition, comprising:

(a) a hydrophilic conjugate comprising:

(i) a hydrophobic synthetic vinyl-type polymer, wherein the polymer is endosomal ~~membrane-disruptive~~ membrane disruptive when released from the hydrophilic conjugate;

(ii) a plurality of pendant hydrophilic polyalkylene oxide components;

and

(iii) a plurality of pH-sensitive linkages, wherein each of the pendant polyalkylene oxide components is covalently linked to the polymer through a pH-sensitive linkage that is stable at a pH between 6.8 and 8 and hydrolyzed at a pH less than 6.5; and

(b) a therapeutic or diagnostic agent.

42. (Previously presented) The composition of Claim 41, wherein the synthetic vinyl-type polymer is a terpolymer of dimethylaminoethyl methacrylate, butyl methacrylate, and styrene benzaldehyde.

43. (Previously presented) The composition of Claim 41, wherein the pH-sensitive linkage is selected from the group consisting of an acetal, a dithioacetal, an ester, an orthoester, and a carbamate.

44. (Previously presented) The composition of Claim 41, wherein the therapeutic or diagnostic agent is selected from the group consisting of a protein, a peptide, a saccharide, a polysaccharide, an organic molecule, a nucleotide, an antisense nucleotide, an oligonucleotide, a ribozyme, a ribozyme guide sequence, a triplex forming oligonucleotide, and a gene.